

## CLAIMS

## WHAT IS CLAIMED IS:

1. A laser which comprises:  
a laser source containing:  
5 a laser resonator;  
a laser media; and  
a means of exciting the laser media;  
a power source for causing the laser source to generate a laser beam; and  
a fan for generating an air flow;  
10 wherein the laser source and the power source each have an exterior  
surface; and  
wherein the laser source and the power source are arranged in an end-to-  
end series relation along a longitudinal axis such that the fan directs the air flow generally  
in the direction of the longitudinal axis to pass first substantially adjacent to the exterior  
15 surface of the laser source for the cooling thereof, and then to pass substantially adjacent  
to the exterior surface of the power source for subsequent cooling thereof.
2. The laser of claim 1, wherein each of the exterior surfaces of said laser  
source and said power source includes:  
20 a substantially developed surface to facilitate transfer of heat to air;  
wherein the fan directs the air flow substantially adjacent to the developed  
surface of each of said laser source and said power source.

3. The laser of claim 2, wherein said developed surfaces are cooling fins.
4. The laser of claim 3, wherein said cooling fins on said laser source are profiled in a direction along the longitudinal axis of the laser.
5. The laser of claim 1, wherein said laser source and said power source have generally equal cross-sectional areas in a direction perpendicular to the longitudinal axis.
6. The laser of claim 1, further comprising:
- 10 a shroud for covering said laser source and said power source, with said shroud including:
- interior walls forming a single air channel for directing the air flow along the longitudinal axis to pass substantially adjacent to the exterior surfaces of said laser source and said power source.
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7. A laser which comprises:
- a laser source containing:
- a laser resonator;
- a laser media; and
- 20 a means of exciting the laser media;
- a power source substantially adjacent said laser source and adapted for causing the laser source to generate a laser beam; and

a cooling fan positioned substantially adjacent said power source and located in a generally straight line path with said laser source and said power source, said cooling fan adapted for generating an air flow for cooling said laser source and said power source.

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8. The laser of claim 7, wherein said cooling fan generates the air flow in a direction to cool said laser source before cooling said power source.

9. The laser of claim 7, wherein said cooling fan generates the air flow in a  
10 direction to cool said power source before cooling said laser source.

10. The laser of claim 7, wherein each of said laser source and said power source includes:

a substantially developed surface to facilitate a transfer of heat to air on a  
15 respective exterior surface;

wherein said cooling fan directs the air flow substantially adjacent to the developed surface of each of said laser source and said power source.

11. The laser of claim 10, wherein said developed surfaces are cooling fins.  
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12. The laser of claim 11, wherein said cooling fins on said laser source are profiled in a direction along the longitudinal axis of the laser.

13. The laser of claim 7, wherein said laser source and said power source have generally equal cross-sectional areas in a direction perpendicular to the generally straight line path.

5 14. The laser of claim 7, further comprising:  
a shroud for covering said laser source and said power source, with said shroud forming a single air channel for directing the air flow along the generally straight line path to pass substantially adjacent said laser source and said power source.

10 15. A laser which comprises:  
a laser source containing:  
a laser resonator;  
a laser media; and  
a means of exciting the laser media;  
15 a power source substantially adjacent said laser source and adapted for causing the laser source to generate a laser beam; and  
a cooling fan adapted for generating an air flow directed in a generally straight line path with said laser source and said power source for cooling said laser source and said power source.

20 16. The laser of claim 15, wherein said cooling fan generates the air flow in a direction to cool said laser source before cooling said power source.

17. The laser of claim 15, wherein said cooling fan generates the air flow in a direction to cool said power source before cooling said laser source.

18. The laser of claim 15, wherein each of said laser source and said power  
5 source includes:

a substantially developed surface to facilitate transfer of heat to air on a respective exterior surface;

wherein said cooling fan directs the air flow substantially adjacent to the developed surface of each of said laser source and said power source.

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19. The laser of claim 18, wherein said developed surfaces are cooling fins.

20. The laser of claim 19, wherein said cooling fins on said laser source are profiled in a direction along the longitudinal axis of the laser.

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21. The laser of claim 15, wherein said laser source and said power source have generally equal cross-sectional areas in a direction perpendicular to the generally straight line path.

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22. The laser of claim 15, further comprising:

a shroud for covering said laser source and said power source, with said shroud forming a single air channel for directing the air flow along the generally straight line path to pass substantially adjacent said laser source and said power source.